CLAIMS

1-63. (Canceled)

64. (Previously Presented) A computer-implemented method for supporting decision-making, the method comprising:

(a) constructing a model of a decision domain for creating a plurality of scenarios in the decision domain, the model constructed based on a received selection of a predefined model from among a plurality of predefined models of decision domains;

(b) receiving user-specified (i) baseline scenario parameters defining a baseline scenario, (ii) scenario parameters defining one or more alternative scenarios, and (iii) decision parameters defining one or more candidate decisions, wherein:

each scenario depicts a situation in the decision domain for which one or more candidate decisions potentially affecting the corresponding scenario parameters could be adopted,

each of the one or more alternative scenarios represents a possible future into which the baseline scenario could evolve, and

each candidate decision represents an intervention for influencing the alternative scenario parameters defining the one or more alternative scenarios;

(c) simulating, for one or more future time instants, each of the one or more alternative scenarios as influenced by (i) each candidate decision represented by the candidate decision parameters and (ii) parameters characterizing assumptions in alternative scenarios; and

(d) for each candidate decision represented by the candidate decision parameters, outputting simulation results based on the alternative scenario parameters corresponding to the simulated alternative scenarios at one or more future time instants.

65. (Currently Amended) The invention of claim 64, wherein, for a user to construct a user-specified scenario, the [[a]] predefined model for the [[a]] decision domain defines:

(1) one or more types of entities defining one or more types of people, places, things, events, and decision strategies in the decision domain,

(2) one or more attributes for each entity type representing one or more (i) properties of the entity type and (ii) relationships between entity types, and

(3) one or more dynamic behaviors of people, places, things, events, and decision strategies representing sources of change in the decision domain, the dynamic behaviors behavioral dynamics representing one or more ways entities (i) change over time and (ii) interact with each other, the one or more dynamic behaviors being ascribed to one or more entity types that depict people, places, things, and decision strategies.

66. (Previously Presented) The invention of claim 64, wherein the user-specified scenario parameters include:

(1) entity parameters identifying a plurality of entities populating the scenario, wherein the entities are instances of the model's entity types,

(2) attribute parameters characterizing one or more of the entities in the scenario, and

(3) relational parameters representing relationships between one or more entities in the scenario.

67. (Previously Presented) The invention of claim 66, wherein each of the one or more alternative scenarios corresponds to assumptions about one or more situational forces, trends, events, and entity behaviors that drive a plausible alternative evolution of the baseline scenario over one or more future time instants.

68. (Previously Presented) The invention of claim 66, wherein the attribute parameters include performance metrics indicating one or more strengths and weaknesses of the one or more candidate decisions at one or more future time instants.

69. (Previously Presented) The invention of claim 66, wherein the attribute parameters include both numeric and qualitative characteristics of scenario entities.

70. (Previously Presented) The invention of claim 69, wherein the attribute parameters are permitted to assume values of any one or more of the following data types: integer or real numbers, symbols, lists, tables, vectors, relationships, interval ranges, free text, and Boolean descriptors.

71. (Previously Presented) The invention of claim 66, wherein attribute parameters have descriptive metadata for user-specified annotations.

72. (Previously Presented) The invention of claim 71, wherein the metadata includes one or more comments about user-specified values for attribute parameters, references to the data sources of the user-specified values, classification as to the user-specified values being known as a fact or as an assumption, and the degree of certainty of an assumption.

73. (Previously Presented) The invention of claim 66, wherein the simulation of step (c) is based on situational dynamics including one or more behavioral rules, formulas, trends, and algorithmic methods characterizing changes in one or more alternative scenario parameters caused by one or more behaviors of one or more entities.

74. (Previously Presented) The invention of claim 73, wherein the situational dynamics are specified either (i) as pre-defined elements in the decision domain model, (ii) via user-specified attribute parameters, or (iii) both pre-defined elements in the decision domain model and via user-specified attribute parameters.

75. (Previously Presented) The invention of claim 64, further comprising storing persistently, for each candidate decision represented by the candidate decision parameters, scenario parameters corresponding to baseline and alternative scenarios received in step (b).

76. (Previously Presented) The invention of claim 64, further comprising storing persistently, for outputs produced by simulations of alternative scenarios and candidate decisions over one or more future time instants, all changes in scenario entities and attribute parameters of the scenario entities simulated in step (c).

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77. (Previously Presented) The invention of claim 64, wherein step (d) comprises graphically displaying one or more summaries of changes in alternative scenario parameters corresponding to the simulated alternative scenarios over one or more future time instants for purposes of analyzing projected outcomes of simulated candidate decisions.

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78. (Previously Presented) The invention of claim 77, wherein the summaries are produced in graphic plot or tabular report formats based on user-specified queries.

79. (Previously Presented) The invention of claim 77, wherein the summaries enable comparative 15 analysis of one or more differences, strengths and weaknesses of candidate decisions in achieving desired results across alternative scenarios.

80. (Previously Presented) The invention of claim 64, wherein step (b) comprises permitting user entry of one or more scenario parameters and candidate decision parameters.

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81. (Previously Presented) The invention of claim 80, wherein step (b) comprises permitting user entry of one or more scenario parameters and candidate decision parameters by means of one or more graphically-displayed controls.

25   82. (Previously Presented) The invention of claim 64, wherein step (b) comprises storing baseline scenario parameters and permitting user entry of alternative scenario parameters by copying baseline or alternative scenarios and altering one or more of the copied scenario parameters.

83. (Previously Presented) The invention of claim 64, wherein step (b) comprises permitting 30 automated import of one or more scenario parameters and candidate decision parameters from one or more external sources.

84. (Previously Presented) The invention of claim 83, wherein the one or more external sources includes an interface to a database.

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85. (Previously Presented) The invention of claim 83, wherein the one or more external sources includes one or more files in a common data exchange format.

86. (Previously Presented) The invention of claim 85, wherein the common data exchange format is a comma-delimited spreadsheet export format (CSV) or an extensible markup language (XML) document format.

87. (Previously Presented) The invention of claim 64, wherein step (b) comprises permitting automated import of one or more scenario parameters and candidate decision parameters from a library of previously stored scenario entities.

88. (Previously Presented) The invention of claim 64, wherein step (c) comprises applying a parallel discrete-event simulation technique.

89. (Previously Presented) The invention of claim 64, wherein step (c) comprises applying a statistical-simulation technique.

90. (Previously Presented) The invention of claim 89, wherein the statistical-simulation technique is a Monte Carlo simulation.

91. (Previously Presented) The invention of claim 64, wherein step (c) comprises applying a system dynamics simulation technique.

92. (Previously Presented) The invention of claim 64, wherein step (c) comprises applying a complex adaptive system or distributed agent simulation technique.

93. (Previously Presented) The invention of claim 64, wherein step (c) comprises applying an event-based simulation technique.

94. (Previously Presented) The invention of claim 64, wherein step (c) comprises using a Bayesian inference technique to compound conditional probabilities.

95. (Previously Presented) The invention of claim 64, wherein step (c) comprises applying a combination of two or more simulation techniques in projecting scenario dynamics.

96. (Previously Presented) The invention of claim 64, wherein step (c) is performed by a framework containing a set of simulation techniques and adapted to receive and use one or more new simulation techniques performed based on simulation technique parameters specified by a user.

97. (Previously Presented) The invention of claim 64, wherein step (c) comprises permitting a user to monitor the progress of the simulation in real time.

98. (Previously Presented) The invention of claim 64, wherein step (c) comprises permitting a user to pause simulations, inspect performance metrics and other scenario and decision parameters, interactively change scenario and decision parameters, and resume simulations.

99. (Currently Amended) The invention of claim 64, wherein step (d) comprises permitting a user to interactively specify ~~the~~ one or more analyses to perform.

100. (Previously Presented) The invention of claim 99, wherein the analyses include one or more (i) graphic time series and histogram charts of scenario attributes and (ii) tabular reports summarizing changes in entity attribute parameter values over one or more future time instants.

101. (Previously Presented) The invention of claim 99, wherein the analyses permit comparison of entity attribute parameter values over one or more future time instants across simulation runs of different candidate decisions under alternative scenarios.

102. (Previously Presented) The invention of claim 64, wherein at least one intervention is a strategy, plan, investment, or other proposed course of action for influencing a scenario in a desired manner.

103. (Previously Presented) The invention of claim 64, wherein at least one intervention is a strategy not to influence the alternative scenario parameters.

104. (Previously Presented) A computer system for supporting decision-making, the system comprising:

(a) means for constructing a model of a decision domain for creating a plurality of scenarios in the decision domain, the model constructed based on a received selection of a predefined model from among a plurality of predefined models of decision domains;

(b) means for receiving user-specified (i) baseline scenario parameters defining a baseline scenario, (ii) scenario parameters defining one or more alternative scenarios, and (iii) decision parameters defining one or more candidate decisions, wherein:

each scenario depicts a situation in the decision domain for which one or more candidate decisions potentially affecting the corresponding scenario parameters could be adopted,

each of the one or more alternative scenarios represents a possible future into which the baseline scenario could evolve, and

each candidate decision represents an intervention for influencing the alternative scenario parameters defining the one or more alternative scenarios;

(c) means for simulating, for one or more future time instants, each of the one or more alternative scenarios as influenced by (i) each candidate decision represented by the candidate decision parameters and (ii) parameters characterizing assumptions in alternative scenarios; and

(d) for each candidate decision represented by the candidate decision parameters, means for outputting simulation results based on the alternative scenario parameters corresponding to the simulated alternative scenarios at one or more future time instants.

105. (Previously Presented) A machine-readable medium, having encoded thereon program code, wherein, when the program code is executed by a machine, the machine implements a method for supporting decision-making, the method comprising the steps of:

(a) constructing a model of a decision domain for creating a plurality of scenarios in the decision domain, the model constructed based on a received selection of a predefined model from among a plurality of predefined models of decision domains;

(b) receiving user-specified (i) baseline scenario parameters defining a baseline scenario, (ii) scenario parameters defining one or more alternative scenarios, and (iii) decision parameters defining one or more candidate decisions, wherein:

each scenario depicts a situation in the decision domain for which one or more candidate decisions potentially affecting the corresponding scenario parameters could be adopted,

each of the one or more alternative scenarios represents a possible future into which the baseline scenario could evolve, and

each candidate decision represents an intervention for influencing the alternative scenario parameters defining the one or more alternative scenarios;

(c) simulating, for one or more future time instants, each of the one or more alternative scenarios as influenced by (i) each candidate decision represented by the candidate decision parameters and (ii) parameters characterizing assumptions in alternative scenarios; and

(d) for each candidate decision represented by the candidate decision parameters, outputting simulation results based on the alternative scenario parameters corresponding to the simulated alternative scenarios at one or more future time instants.

106. (Currently Amended) A computer-implemented method of constructing a decision-support application for a decision domain, the method comprising:

(a) constructing a decision model of the [[a]] decision domain for creating a plurality of scenarios in the decision domain, the decision model comprising a plurality of decision-model entity classes;

(b) creating specifications for linking the plurality of decision-model entity classes to a decision-support simulator framework;

(c) populating an application database for the decision domain based on the plurality of decision-model entity classes; and

(d) compiling the application database and the specifications to generate [[a]] the decision-support application, wherein the decision-support application that is executable under the decision-support simulator framework.

107. (Currently Amended) The invention of claim 106, wherein the plurality of decision-model entity classes comprising a scenario class have a plurality of associated classes, each entity class further defined by (i) one or more entity attributes characterizing one or more ~~of the~~ entities in the scenario class, (ii) one or more relationship attributes representing relationships between one or more entities in the scenario class, and (iii) one or more class interfaces defining methods representing entity behaviors and dynamic interactions.

108. (Previously Presented) The invention of claim 106, wherein the decision-model entity classes are types defined by one or more object-oriented programming languages.

109. (Previously Presented) The invention of claim 108, wherein the one or more object-oriented programming languages include one or more of Java, C++, and C#.

110. (Currently Amended) The invention of claim 106, wherein step (a) comprises providing a software development environment for a user to create the ~~application-specific~~ decision model, wherein the decision model is application-specific.

111. (Currently Amended) The invention of claim 106, wherein step (c) comprises:

(i) using an automated code generator to generate code embodying ~~the~~ relational schema and metadata from entity type specifications; and

(ii) editing and executing the code to generate relational schema and metadata for the ~~application-specific~~ decision model, wherein the decision model is application-specific.

112. (Currently Amended) The invention of claim 106, further comprising creating one or more application-specific reports for organizing simulation output, wherein the compiling in step (d) comprises compiling ~~(iii)~~ the one or more application-specific reports.

113. (Currently Amended) A computer system for constructing a decision-support application for a decision domain, the system comprising:

(a) means for constructing a decision model of the [[a]] decision domain for creating a plurality of scenarios in the decision domain, the decision model comprising a plurality of decision-model entity classes;

(b) means for creating specifications for linking the plurality of decision-model entity classes to a decision-support simulator framework;

(c) means for populating an application database for the decision domain based on the plurality of decision-model entity classes; and

(d) means for compiling the application database and the specifications to generate a decision-support application that is executable under the decision-support simulator framework.

114. (Currently Amended) A machine-readable medium, having encoded thereon program code, wherein, when the program code is executed by a machine, the machine implements a method for constructing a decision-support application for a decision domain, the method comprising the steps of:

(a) constructing a <u>decision</u> model of <u>the</u> [[a]] decision domain for creating a plurality of scenarios in the decision domain, the decision model comprising a plurality of decision-model entity classes;

(b) creating specifications for linking the plurality of decision-model entity classes to a decision-support simulator framework;

(c) populating an application database for the decision domain based on the plurality of decision-model entity classes; and

(d) compiling the application database and the specifications to generate a decision-support application that is executable under the decision-support simulator framework.

115. (Currently Amended) A computer-implemented method of supporting decision-making <u>for a decision domain</u>, the method comprising:

(a) generating, based on user input, a plurality of alternative scenarios representing possible evolutions of a baseline scenario;

(b) generating, based on user input, a plurality of strategies for influencing the alternative scenarios;

(c) simulating outcomes of each of the strategies for each of the alternative scenarios over time; and

(d) providing output data, based on the simulated outcomes, to permit comparison of the simulated outcomes for each of the strategies.

116. (Previously Presented) The invention of claim 115, wherein the outcomes include one or more performance metrics to permit selection of an optimal strategy, and wherein step (d) further comprises outputting one or more performance metrics.

117. (Currently Amended) The invention of claim 116, wherein <u>the</u> an optimal strategy is a strategy that displays superior values of performance metrics across the plurality of alternative scenarios.

118. (Currently Amended) The invention of claim 115, further comprising:

(e) changing and refining the plurality of strategies based on comparisons of the strategies and the projected outcomes of the strategies;

(f) updating the alternative scenarios based on the simulated <u>outcome</u> results of the selected optimal strategy; and

(g) simulating results of each of an updated plurality of strategies based on the updated alternative scenarios.

119. (Previously Presented) The invention of claim 115, wherein the decision domain is selected from the group consisting of: structure of legislation, public policy, competitive strategy, change management, portfolio management, military strategy, and corporate governance.

120. (Previously Presented) A computer system for supporting decision-making, the system comprising:

(a) means for generating, based on user input, a plurality of alternative scenarios representing possible evolutions of a baseline scenario;

(b) means for generating, based on user input, a plurality of strategies for influencing the alternative scenarios;

(c) means for simulating outcomes of each of the strategies for each of the alternative scenarios over time to permit comparison of the simulated outcomes; and

(d) means for providing output data, based on the simulated outcomes, to permit comparison of the simulated outcomes for each of the strategies.

121. (Previously Presented) A machine-readable medium, having encoded thereon program code, wherein, when the program code is executed by a machine, the machine implements a method of supporting decision-making, the method comprising the steps of:

(a) generating, based on user input, a plurality of alternative scenarios representing possible evolutions of a baseline scenario;

(b) generating, based on user input, a plurality of strategies for influencing the alternative scenarios;

(c) simulating outcomes of each of the strategies for each of the alternative scenarios over time to permit comparison of the simulated outcomes; and

(d) providing output data, based on the simulated outcomes, to permit comparison of the simulated outcomes for each of the strategies.